REMARKS

This Response is filed in reply to the Office Action dated July 17, 2007. Claims 1-54 are pending. Claims 1-54 are rejected. In this Response, claims 2-20, 22-29 and 40-54 are amended. No claims are cancelled and no new claims are added. Accordingly, claims 1-54 remain pending in the application, of which claims 1, 21, 30 and 39 are independent.

Silence with regard to any of the Examiner's rejections is not acquiescence to such rejections, but rather a recognition by Applicants that such previously lodged rejection is moot based on Applicants' remarks and/or amendments. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicants consider allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim, but rather a recognition by Applicants that such previously lodged rejection is moot based on Applicants' remarks and/or amendments relative to the independent claim (that Applicants consider allowable) from which the dependent claim depends. Furthermore, any cancellations of and amendments to the claims are being made solely to expedite prosecution of the instant application. Applicants reserve the option to further prosecute the same or similar claims in the instant or a subsequent application.

Objections to Claims

The Examiner objected to claims 2-20, 22-29 and 40-54 because of informalities.

Claims 2-20 are amended as requested by the Examiner to refer to "the method" rather than "a method" (claims 2-20), and to refer to "the time" rather than "a time. (claims 10-11)

Claims 22-29 are amended to refer to "the processor" rather than "a processor" as requested by the Examiner. However, Applicants respectfully suggest that the references in claims 22-29 to "instructions" are proper, in that the claims each recite that "[t]he computer-readable medium" which is their subject matter "further compris[es]" the "instructions" to which each of claim 22-29 is referring. Hence, the instructions are

additional instructions beyond those included in the claims (claims 21, 23 and 25) from which those claims depend and to which those claims therefore refer. Hence, the "instructions" recited in claims 21, 23 and 25 from which these dependent claims depend do not provide antecedent basis for the instructions recited in the dependent claims.

Claims 40-54 are amended to refer to "the processor" rather than "a processor" as requested by the Examiner. However, Applicants respectfully suggest that the references in claims 40-54 to "instructions" are proper, in that the claims each recite either (1) that "[t]he computer program" which is their subject matter "further includ[es] instructions" which the claim then sets forth (claims 42-43, 48-51 and 53-54), or (2) that "said instructions ... further include instructions" which the claim then sets forth (claims 40-41, 44-47 and 52). In both situations, the instructions are *additional* instructions beyond those included in the claims from which those claims depend and to which those claims therefore refer. Hence, the "instructions" recited in the claims from which these dependent claims depend do not provide antecedent basis for the instructions recited in the dependent claims.

Claims 2-20, 22-29 and 40-54, as amended, clearly point out and distinctly claim the respective methods, computer-readable media and computer programs recited in the claims.

Claim Rejections Under §102

The Examiner rejected claims 1, 18-21, 23, 24, 30, 32, 33, 39 and 52-54 under U.S.C. §102(b) as being anticipated by Asano et al., U.S. Patent 5,815,664 ("Asano"). Applicants traverse the Examiner's rejections under 35 U.S.C. §§ 102(b) and respectfully request reconsideration in view of the remarks herein. The claims under examination herein and Asano are addressed to very different issues, and solve very different problems using very different methods. Asano does not render any pending claims herein unpatentable.

Independent claim 1 under examination sets forth "a method of detecting unauthorized access attempts to a network." Thus, what is "unauthorized" are "access

attempts to a network." The method begins with "receiving a request from a user to obtain an address." Rather than providing the address in the next step, the method "obtain[s] said address," then "appl[ies] a function to said address to obtain a return address ... corresponding to a used one of a block of addresses," and then "return[s] said address to [the] user." Thereafter, the method "detect[s] an authorized attempt to access said address when an attempted address corresponds to an unused one of said block of addresses."

Thus, in the method of claim 1, the "return address" which is "returned ... to said user" in the method "correspond[s] to a used one of a block of addresses." Hence, "an unauthorized attempt to access said address" is "detect[ed] ... when an attempted address corresponds to an unused one of said block of addresses."

Asano, in contrast, deals with a very different situation, and carries out a very different process. Asano is an address reporting method. In Asano, the problem to be solved has nothing to do with detecting unauthorized (and possibly malicious or harmful) attempts to access a network. Rather the problem is one of *facilitating* access to computers. The problem Asano is addressing results from the fact that there may be an insufficient number of addresses on an IP network to accommodate all possible users. As Asano states it, as a result of that shortage:

> [I]t is difficult for networks of a corporation, a research organization, a university or a college participating in the IP network to acquire from the NIC as many addresses as machines (hosts) that the networks are provided with. (Col. 1, lines 39-42)

As a consequence of that problem, Asano states, such an organizational network will "accommodat[e] hosts totaling a number larger than the number of addresses acquired from the NIC," (Col. 1, lines 42-44) and thus will

> include[] hosts having an address defined independently by the network, i.e. *a private address (hereinafter, referred to as an unauthorized address)* which is strictly for use inside the network and which can not be recognizably reported outside the associated network, in addition to hosts that are assigned an address acquired from the NIC (hereinafter, referred to as an authorized address). (Emphasis added.) (Col. 1, lines 45-51)

In other words, in Asano a host or user who is a part of an organizational network may be assigned an *"unauthorized"* address if the number of hosts or users in that organizational network exceeds the number of IP addresses available for use by that organizational network. In that case, some users cannot be assigned "authorized" addresses on the IP network because not enough are available, and instead they are assigned "private" addresses on the organizational network; these private addresses are defined by Asano as "unauthorized" addresses in his nomenclature, in the sense that they do not have authorized IP network addresses. However, there is nothing "unauthorized" about their participation in the organizational network, or in their attempts to access other networks or computers. These unauthorized addresses in Asano are so-called only because they are private addresses, which have a meaning within the organization but are not recognized outside it over the larger IP network.

Asano then deals with how those "extra" users may be assigned authorized addresses for use while communicating over the larger network. It describes "pairing" an unauthorized address with an authorized address for use while communicating over the larger network. Because "authorized" addresses may be paired with an "unauthorized" address only when the "unauthorized" address is communicating or wishes to communicate over the network, fewer authorized addresses may be needed than the number of unauthorized addresses.

It thus will be apparent that claim 1 herein and Asano are addressing very different problems. Not surprisingly, since it is directed at solving a different problem, Asano does not disclose the steps of claim 1.

In particular, the Examiner states that Asano discloses "<u>a method of detecting unauthorized access attempts</u>", by citing line 6 of the Asano Abstract. However, that portion of Asano refers to determining whether an address corresponding to a machine name in a query is an "unauthorized address." As discussed above, an "unauthorized address" as defined by Asano is simply *"a private address ... which is strictly for use inside the network and which can not be recognizably reported outside the associated*

network." The address is defined by Asano as "unauthorized," but it is *not* associated with an "unauthorized access attempt[] to a network", which is the subject of claim 1 herein. Because Asano is not directed at *preventing* access by or to persons with unauthorized addresses, the Abstract continues by describing that if it is determined that an address is unauthorized, rather than preventing access, an authorized address is provided to be associated with the unauthorized address. This further demonstrates that Asano is not concerned with detecting unauthorized access attempts.

In addition, the Examiner states that Asano discloses "detecting an unauthorized attempt to access said address when an attempted address corresponds to an unused one of said block of addresses," by citing Asano, col. 5, line 18 and the Abstract. However, neither the Abstract nor the cited excerpt from column 5 discloses an attempted address corresponding to an unused address in a block of addresses, and neither discloses determining based on any such attempted address that an attempt to access is unauthorized. (The portion of Asano cited at col. 5 discloses a plurality of authorized and unauthorized addresses, but it does not disclose an *unused* address in a block of addresses, and it does not disclose detecting any attempt at unauthorized access based on an attempted address corresponding to an unused address. Rather, as discussed above, it discusses facilitating access.)

It follows that Asano does not anticipate claim 1.

Because claim 21 is an independent "computer-readable medium" claim analogous to claim 1, claim 30 is an independent "system" claim reciting "means for" accomplishing the steps of claim 1, and claim 39 is an independent "computer program" claim analogous to claim 1, it follows that these claims should be allowed for the reasons set forth above with respect to claim 1.

Dependent claims 18-20, 23, 24, 32, 33, and 52-54 also were rejected as unpatentable over Asano. Insofar as these claims depend from claims 1, 21, 30 and 39, and insofar as those claims are allowable for the reasons set forth above, it follows that these claims are allowable as well.

Claim Rejections Under §103

The Examiner rejected claims 2-8, 13-17, 22, 25, 28, 29, 31, 34, 37, 38, 40-44 and 47-51 under U.S.C. 103(a) as being unpatentable over Asano in view of Bruce Schneier, "Applied Cryptography: protocols, algorithms, and source code in C", 2nd edition, published October 1995 (referred to hereinafter as Schneier).

The Examiner rejected claims 9, 10, 11, 26, 35 and 45 under U.S.C. 103(a) as being unpatentable over Asano in view of Schneier and Ramakrishnan et al., U.S. Patent Ser. No. 6,085,215 (referred to hereinafter as Ramakrishnan).

The Examiner rejected claims 12, 27, 36 and 46 under U.S.C. 103(a) as being unpatentable over Asano in view of Schneier and Cherian et al., U.S. Patent Ser. No. 5,930,497 (referred to hereinafter as Cherian).

Applicants traverse the Examiner's rejections under 35 U.S.C. §§ 103(a), and respectfully request reconsideration in view of the remarks herein. Insofar as Applicants have demonstrated above that Asano does not disclose the steps of claim 1, and insofar as the claims rejected under §103 all depend from claim 1, or from analogous claims 21, 30 or 39, it follows that claims 2-17, 22, 25-29, 31, 34-38 and 40-51 all are allowable.

CONCLUSION

Based on the above remarks, it is respectfully submitted that the claims and thus this application are in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicants' attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call Michael A Wrenn at the Patent Management Group number below.

Respectfully submitted,

Date: <u>October 12, 2007</u>

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